NOTES FROM 03.02.05 PROTON DRIVER MEETING - CIVIL

Attendees: Bill Foster, Mike May, Dixon Bogert, Lee Hammond, Rod Walton, Ed Crumpley, Rich Stanek, Elaine McCluskey

Items discussed:

1. Ventilation in Linac enclosure and transfer line:
    a. Current MI situation is put air in the tunnel, then dehumidify it. Lee would prefer to dehumidify first, then supply it to the tunnel.
    b. Assumption is that tunnel is reasonably dry environment to start with, not like NuMI tunnel that has water running down walls.
    c. Suggestion is to recirculate air for sustainability, probably locally every 200 ft.
    d. Question of how to flush out helium in linac - answered by possibly using full outside air in that situation, then exhausting
    e. Desire is to use pre-conditioned air throughout tunnels to aid in drying out tunnel for finishing activities during construction (painting, etc) as well as keeping it drier during operations, since this tunnel isn't expected to be as warm as other Fermilab tunnels.
    f. Criteria for design of tunnel vent system:
        i. Continuous duct space seems like good idea, but may not have room for this in transfer line.
        ii. ODH classification – trying for ODH zero. This might require venting helium into return pipe or to emergency pipe
        iii. Concern – not resolved - of how to keep He out of waveguide penetrations to go up to gallery, and how to keep unconditioned air from gallery from going to tunnel through same penetrations.
        iv. Additional considerations: mitigation of intruding air from hatch in L-25 building into access tunnel. Idea is to hang plastic curtains to restrict air movement, or put in door.
        v. HVAC units would be standard equipment most likely, not desiccant units.
        vi. Assume units are above grade, not in tunnel. This implies ductwork to tunnel, but permits maintenance activities at any time.
        vii. No particular ventilation may be required for aborts.
2. Equipment cross-sections:
    a. Waveguide discussion
        i. Installation of same: allow for clear space in gallery and hatch in roof.
        ii. What is size of waveguide penetration required? Have been showing 24" diameter on drawings, based on prior PD designs.
        iii. Should waveguides and cables be in same penetration? Maybe not, to make cables easier to run, and perhaps for cable performance.
        iv. To be further investigated
    b. Lowering floor: Tom Nichols said bottom things might be eliminated. Therefore, lowering floor in front end of tunnel may not be required.
3. Naming facilities:
    a. Names have been proposed for buildings to make it easier for documentation.
    b. Conclusions about how to station tunnels is that in the linac, could use cryomodule numbers or waveguide penetration numbers.
    c. Doors in buildings could correspond to these tunnel numbers below.
    d. Transfer line could be stationed by magnets
4. Environmental proposals for wetland determination:
    a. Proposal has been received for doing determination for planning purposes. Deliverable is aerial photo with wetland areas marked
    b. Can overlay proposed alignment
    c. Need to do this before Corps of Engineers visit
    d. This work will be done on a different project/task code than is being currently used.
5. Front End (Upstream) Building
    a. What handling equipment is needed here? Crane to offload from trucks, may need OH crane, size uncertain
    b. Will klystrons be offloaded here? Perhaps will have mid-gallery location that would be taller. This requires further study.

ITEMS FOR NEXT MEETING:
Chuck and Elaine finalizing drawings for Director's review on 3/15/05. Plan to incorporate all new information on drawings.
Mike to continue development on equipment cross-sections

NEXT MEETING 3/9/05 AT 9:30 A.M. IN THE conFESSional WH5NE